DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-009963
Date Inspected: 27-Oct-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 645
OSM Departure Time: 1845
Location: Shanghai, China

CWI Name:	Li Jha and Wu Chi Chang			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☐ No	☑ N/A

Bridge No: 34-0006
Component: OBG Trail Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath. Math. was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Assembly Area

Segment 1AE to 1BE

This Quality Assurance (QA) Inspector witnessed final tension verification for U-Rib to U-Rib at U-Rib locations as 16, 17, 33, 35 and 36 only at between PP 10 and PP 11 for Segment 1AE to 1BE. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M22 x 70 RC Set# DHGM220004 and final torque required is 453 N-m.

Bolt sizes used were M22 x 80 RC Set# DHGM220050 and final torque required is 486 N-m.

Bolt sizes used were M22 x 85 RC Set# DHGM220013 and final torque required is 433 N-m.

Bolt sizes used were M22 x 65 RC Set# DHGM220033 and final torque required is 470 N-m.

Manual Torque wrench used with Sr. No. XO2-625 for tension verification.

Segment 2 East

This Quality Assurance (QA) Inspector witnessed final tension verification for Bottom Panel to Bottom Plate at FL3 area between PP 14 and PP 15 for Segment 2 East. Inspected 10% on a random basis and found the tension to be in general compliance.

Bolt sizes used were M24 x 85 RC Set# DHGM240015 and final torque required is 517 N-m.

Manual Torque wrench is been used with Sr. No. XO2-625.

Signed Off Green Tag's

This Quality Assurance (QA) Inspector witnessed final tension verification for following depicted locations. Inspected 10% on a random basis and found the tension to be in general compliance and thus signed off the Green Tags.

At Segment 1AE to 1BE at Panel Point 10 and 11 U-Rib to U-Rib (Except No. 16, 17, 33, 35 and 36 from North) and Bolt Size used was M22 x 65 RC Set# DHGM220033 and final torque required was 470 N-m and Green Tag No. 397.

At Segment 2AW at Panel Point 13.5 to 14 U-Rib to U-Rib (Big Splice location No.2 (L) from North) and Bolt Size used was M22 x 85, M22 x 65 and M22 x 70 RC Set# DHGM220047, RC Set# DHGM220021 and RC Set# DHGM220020 and final torque required was 427 N-m, 543 N-m and 520 N-m and Green Tag No. 398.

At Segment 2AW at Panel Point 13.5 to 14 U-Rib to U-Rib and Bolt Size used was M22 x 80 and M22 x 65 RC Set# DHGM220012 and RC Set# DHGM220021 and RC Set# DHGM220012 and RC Set# DHGM220021 and final torque required was 427 N-m and 543 N-m and Green Tag No. 399.

Segment 1AW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for mis-drilled holes welding was performed earlier and UT Test performed and found rejectable indications at the depth of 18mm, thus against the B-WR8278 Rev-0 welding has been performed as on date for the Segment 1AW. The PMCK identified as P1450A. The welder is identified as 054467. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-4G (4F)-Repair-1. The parameters noted down by QC found in compliance with WPS.

Segment 1AW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for mis-drilled holes welding was performed earlier and UT Test performed and found rejectable indications at the depth of 10mm thus against the B-WR8277 Rev-0 welding was been performed as on date for the Segment 1AW.

The PMCK identified as P1450A. The welder is identified as 054467. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-4G (4F)-Repair-1. The parameters noted down by QC found in compliance with WPS.

Segment 1AW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for mis-drilled holes welding was performed earlier and UT Test performed and found rejectable indications at the depth of 14mm thus against the B-WR8276 Rev-0 welding was performed as on date for the Segment 1AW. The PMCK identified as P1454R. The welder is identified as 054467. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-4G (4F)-Repair-1. The parameters noted down by QC found in compliance with WPS.

Segment 5AE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Deck Panel Drip Plate at Cross Beam side. The weld was identified as OBE5-016/017/020 for the Segment 5AE. The welder is identified as 067571. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2114-Tc-U4b-FCA-1 and WPS-B-P-2113-Tc-U4b-FCM-1. The parameters noted down by QC found in compliance with WPS.

Segment 5BE

This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Longitudinal Diaphragm LD18K for the segment 5BE at PP 32. The welder is identified as 220068. The weld was identified as Seg. 024C-009. The weld was performed against the B-WR8065 Rev.0. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-FCAW-2G (2F)-Repair-1. The parameters noted down by QC found in compliance with WPS.

Segment 5AE to 5BE

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for UT Rejected areas for Deck Panel Corner Assembly for the Segment 5AE to 5BE between PP 32 and 33. The welder is identified as 069769. The weld was performed against the B-WR8328 Rev.0. The weld joint was identified as OBE5-002. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-345-SMAW-4G (4F)-Repair-1. The repair has been performed for the internal side and the Y Datum Lines were noted as below. The parameters noted down by QC found in compliance with WPS.

Y Repair Start at 230mm and Stops at 480mm. Repair Length – 260mm.
Y Repair Start at 560mm and Stops at 700mm. Repair Length – 140mm.
Y Repair Start at 780mm and Stops at 1050mm. Repair Length – 270mm.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

WELDING INSPECTION REPORT

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Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer